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CITY TRAFFIC CONGESTION

by

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CITY TRAFFIC CONGESTION

WORSENING of traffic congestion on city streets, despite extensive construction of motor freeways and introduction of modern traffic control measures, is apparent in almost every big American community. Municipal authorities thus are being forced to consider expansion of mass transportation facilities as a means of reducing the number of cars and the traffic jams on urban thoroughfares.

Private interests, however, are hesitant about investing large capital sums in a type of enterprise which generally has not yielded satisfactory returns in recent years, and the cities themselves have had only limited capacity to establish or extend publicly owned transit systems. The problem is complicated by doubts as to whether suburbanites, if offered swift and frequent public service, could be drawn out of their cars and into buses or trains in sufficient numbers to dispel what is fast becoming a transportation crisis. Proposals to discourage use of private automobiles in city traffic by banning them from downtown areas or by imposing special new tax levies on motorists have met stiff opposition.

Virtually all studies of urban traffic questions have concluded that the cities urgently need a balanced expansion of facilities for both private and public transportation. But there is little agreement on what constitutes a balanced program in a given situation. Effective planning is hampered by a tug-of-war between pro-automobile and pro-rapid transit groups. Fragmentation of political jurisdiction in metropolitan areas raises another obstacle.

The federal government is being drawn increasingly into the urban traffic problem. The Kennedy administration is committed to federal aid to metropolitan areas, possibly through a new Department of Urban Affairs. All experts agree that transportation is at the heart of urban problems. A bill to provide federal aid for urban transportation planning and mass transit development was approved

by the Senate last year and a similar measure was introduced a few days after the 87th Congress convened this year.

OVERLOADING OF STREETS IN FAST-GROWING CITIES

The Senate Banking Committee reported last June 15, after hearings on the urban transportation bill, that "The United States today is in the throes of an urban transportation crisis . . . shaped by the rapidly increasing concentration of vehicles and people in the metropolitan areas . . . and a concomitant decline and deterioration of mass transportation." The committee concluded that unless the trend could be reversed, the metropolitan areas appeared "destined for a total breakdown of their transportation networks." Steps taken to increase road capacity have not kept pace with increased use of automobiles. Construction of expressways leading into the cities has encouraged the influx of cars into downtown streets too narrow to handle the traffic load.

Changing patterns of population are at the root of city traffic jams. At the turn of the century only 24 million Americans, less than one-third of the country's population, lived in metropolitan areas, and those areas did not extend far beyond the city proper. Today 109 million persons, two-thirds of the population, reside in metropolitan areas that stretch 15 or more miles beyond the limits of the central city. Every year the metropolitan areas take in a million acres more and add three million people to their total population. By 1970, when it is estimated that the country's population will reach 215 million, four-fifths will be concentrated in metropolitan areas.

Clustering of people around the cities has been accompanied by a decline in patronage of mass transportation facilities.¹ To make up the resulting loss of revenue, transit companies have increased fares and reduced service, thereby encouraging a further shift to private transportation. Extension of regular transit service to new suburbs, where virtually every family owns at least one car, has proved unprofitable. Meanwhile, the clogging of city traffic has lowered the efficiency of public transit operation. Because most of the nation's future population growth is ex-

¹ The number of passenger trips on all forms of transit dropped from 19 billion in 1945 to 7.6 billion in 1959. According to the American Transit Association, 119 transit companies ceased operations between Jan. 1, 1954, and Sept. 1, 1959; 49 of the systems were taken over by other operators.

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pected to occur in the metropolitan areas, some cities expect a doubling of auto traffic within the next 20 years—unless more people can be induced to use public transit.

INCIPIENT RESISTANCE TO INVASION OF MOTOR CARS

In a report titled *Rationale of Federal Transportation Policy*, the Department of Commerce said last April: "Merely adding highways which will attract more automobiles which will in turn require more highways is no solution to the problems of urban development." Gov. Robert B. Meyner of New Jersey, reviewing efforts by that state to relieve traffic jams in major metropolitan areas, similarly told a Senate Banking subcommittee on May 24: "Highway capacity has been expanded. A third tube of the Lincoln Tunnel [into New York City] has been opened. The Port [of New York] Authority has improved bus commuting facilities. An extra bridge between Philadelphia and Camden has been added. But traffic congestion worsens every day."

A recent report on traffic in Atlanta, where six interstate expressways converge on the downtown area, noted that one portion of a six-lane expressway already had a traffic load that would warrant 16 lanes, and that expected population growth indicated a need 20 years hence for 36 lanes. "By no stretch of the imagination," a Georgia planning official testified before the Senate subcommittee, "is it physically or financially possible to build such a facility."

Municipalities are beginning to resist the automobile's continuing demand for more space. Mayor Anthony J. Celebrezze of Cleveland told the subcommittee that a 3½-mile freeway, which cost \$75 million, took \$30 million worth of property off the city's tax rolls. Other municipal authorities complained that city parks were being torn up for parking lots and garages. Mayor Raymond Tucker of St. Louis, testifying as president of the American Municipal Association, said that "Unless drastic steps are taken to move an increasing number of our people conveniently and pleasantly by mass transportation, the private automobile will cease to be a convenient method of transportation."

The plain fact of the matter is that we just cannot build enough lanes of highway to move all of our people by private automobile and create enough parking space to store the cars without com-

pletely paving over our cities and removing all of the . . . economic, social and cultural establishments that the people are trying to reach in the first place. . . . Even if we could do it physically, the costs would . . . bankrupt the combined resources of city, state and federal government. It is incontestable . . . that we must find ways . . . of moving more . . . people by some form of mass transportation.

Two-thirds of downtown Los Angeles, which expects a population growth of 1½ million in the next decade, is occupied by roads, highways, parking lots and garages. Fifty-six per cent of downtown Detroit is devoted to automobile-serving facilities. Even Manhattan, which still relies heavily on mass transit despite mounting auto traffic, devotes one-third of its downtown land to transportation.

REVIVAL OF INTEREST IN RAIL RAPID TRANSIT LINES

A marked decline in the quantity and quality of commuter rail service, once the major means of transport between the older cities and their suburbs, has contributed significantly to city traffic congestion. Insufficient maintenance, deteriorating equipment, reduced schedules, and finally total abandonment of service have characterized rail commuter systems in recent years. The condition has been attributed largely to loss of the freight traffic which once compensated for the historically unprofitable, twice-a-day commuter runs. The decline of commuter service was hastened by provisions of the Transportation Act of 1958 which authorized the Interstate Commerce Commission to allow railroads to terminate unprofitable runs regardless of state laws or decisions to the contrary.²

Every abandonment of a commuter run increases the volume of bus or, more frequently, private automobile travel into and out of the central city and so adds to urban traffic congestion. Mayor Robert F. Wagner told the Senate Banking subcommittee on May 23 that it would be "just chaos for us in the city of New York to attempt . . . to handle the transportation problem unless these commuter railroads are healthy and operating." An executive of the Metropolitan Regional Council³ said that if only the trains linking New York with Westchester County suburbs were dropped, the city would have to provide an additional 250 acres of space in downtown Manhattan to accommodate

²In New Jersey alone the number of passenger trains in operation fell from 1,113 to 865 after the 1958 act was adopted.

³A body of elected officials representing Connecticut, New Jersey and New York cities and counties in the New York metropolitan area.

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the increased automobile traffic. "We just do not have 250 acres of space," he added.

Growing appreciation of such factors is giving rail service for commuters, and for intra-city travelers, a fresh and increasing appeal to urban authorities. Even cities which have never relied on service of this kind, or cities which have long since abandoned it, are putting rail transit, either subway or surface, in their blueprints for future area development.

The California legislature created the San Francisco Bay Area Rapid Transit District in 1957 to develop plans for a five-county system of rail transit; current plans call for approximately 130 miles of rail lines connecting population centers in and around San Francisco. Similar plans are under way for Los Angeles.

A comprehensive plan for transportation development in Washington, D. C., proposes construction of four high-speed subway and surface rail lines in addition to new freeways for private automobiles and express buses. A temporary National Capital Transportation Agency, created by Congress last July, was directed to give special consideration to early building of a subway linking the city's union rail terminal with the main business and government office district. The Metropolitan Commission for Atlanta, created by the Georgia legislature, has concluded that some form of rapid transit must be introduced in that area.

The attraction of rail service lies in its efficient use of space for fast transport of large numbers of people. It has been estimated that it would take up to 20 lanes of highway—some estimates say more—to transport by automobile the number of people who can be carried on a double-track rail line. The American Municipal Association, after surveying mass transportation facilities in Boston, Chicago, Cleveland, New York and Philadelphia, estimated that it would cost \$31 billion to build the additional highways that would be needed if these cities lost the rail commuter services they have now.

Development from scratch today of municipal subway systems, or rail rapid transit lines extending into outlying suburbs, would require very heavy capital investment. And it is doubtful whether new systems of this kind, operating with heavy loads at best no more than twice a day,

five days a week, could return a profit. Nathan Cherniack, economist of the Port of New York Authority, told a Highway Research Board meeting in Washington on Jan. 12 that most cities would have to subsidize their passenger transportation lines if they were to give the public adequate service.⁴

ATTACK BY A.A.A. ON "ANTI-AUTOMOBILE PROPAGANDA"

Fear has been raised in some quarters that the renewed interest in rapid transit may block plans for new urban expressways and lead to curbs on use of automobiles. The American Automobile Association has taken the lead in marshaling resistance to what it considers a "widespread propaganda campaign, carried on by a . . . highly vocal . . . minority whose aim is to curtail or prohibit use of passenger cars in downtown areas and to restrict or prevent the building of urban expressways." The "anti-automobile, anti-freeway people" are said to include "some mass public transit interests, some planners, some theorists including sociologists and economists, some dissident groups . . . and some public officers who would rather see the urban highway program wrecked or indefinitely delayed than have one penny come from a source other than the pockets of highway users."⁵

The A.A.A. favors construction of both expressways and mass transit facilities, but it considers the former more urgently needed in most areas. The association asserts that rail transit facilities are called for now in only six to 10 of the larger metropolitan areas, though half a dozen additional areas may require them in the next few years.

The association has taken particular exception to a Commerce Department report last March on *Federal Transportation Policy and Program* which urged a "new look" at urban transportation and stressed the need for more rapid transit. The A.A.A. executive committee declared that the report failed "to recognize and urge proper provisions for

⁴ Modern automobile freeways also require large capital investment. The mass transportation plan proposed for Washington, D. C., in 1959 called for rail rapid transit facilities estimated to cost \$458.5 million; but freeway, parkway and major street improvements also described as essential were estimated to cost \$1.8 billion. The chairman of the Chicago Transit Board, testifying before the Senate Banking subcommittee last May 25, pointed out that the rapid transit line built in the median strip of that city's new 10-mile Congress Street expressway cost only about one-third as much as the artery's highway facilities and had three times the latter's carrying capacity; yet the subway is operating at only about one-third capacity and the expressway at near capacity.

⁵ Frederick T. McGuire, Jr., president of American Automobile Association, at A.A.A. meeting in Cleveland, Oct. 11, 1960.

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the dynamic continuing growth of highway transportation." The very nature of metropolitan development, with its increasing dispersion of residences, shopping centers and industry, was said to indicate "a growing need for passenger car transportation since urban decentralization continues to reduce the opportunity for economic mass transportation."

Specific objection was raised to a suggestion that communities might attack traffic congestion by placing "charges on city highway gateways to help divert auto commuter travel to mass transport means, higher community parking fees to help similarly, [and] diversion of such funds to pay for other transport facilities." A.A.A. President Frederick T. McGuire described this as an "iniquitous proposal . . . [to] soak the motorist . . . turning the loot over to subsidize public transportation."

Federal Role in Urban Transportation

THE ROLE of the federal government in urban transportation planning has been growing and is likely to become larger in the years ahead. The Federal Aid Road Act of 1916, which initiated the federal-state program of highway construction, sustained prevailing state policy by forbidding use of highway funds within the bounds of incorporated cities.

State aid for highway construction in specific urban areas began to be made available shortly after World War I. The first use of federal money for improvement of city thoroughfares was authorized by the National Industrial Recovery Act of 1933 in connection with an emergency, make-work program. Statutory prohibitions on use of federal road funds within city limits were permanently lifted in 1934.

EXTENSION OF AID TO LOCAL HIGHWAY BUILDING

Ten years later Congress for the first time allocated a part of the highway construction authorizations to urban portions of the federal-aid primary road system. After that, increasing emphasis was placed on creation of an urban-rural network. The 1956 Federal Aid Highway Act,

which accelerated construction of the 41,000-mile national system of interstate and defense highways, expressed "the intent that local needs, to the extent practicable, suitable and feasible, shall be given equal consideration with the needs of interstate commerce." Nearly one-half of all expenditures on the national road system now go into highways located within or directly serving urban areas.

The highway program has progressed to a point where the officials most closely concerned feel that further development of the urban sections needs in each case to be tied in with over-all urban development plans. The transportation plan would adjust freeway construction, street widening, rapid transit development and other projected traffic improvements to the designated patterns of future land use and the volume of traffic expected in future in each section of the metropolitan area.

The Commerce Department's report last April on *Rationale of Federal Transportation Policy* called for a re-examination of the highway program "with respect to urban transportation." It urged closer coordination of all aspects of municipal planning so that future highway expenditures would be based on integrated plans for different types of transportation facilities. Ellis L. Armstrong, Commissioner of the U.S. Bureau of Public Roads, said in Boston on June 9 that "The interstate system cannot possibly solve all the existing and future highway needs of our urban areas." Over-extension of urban freeways, Armstrong warned, would "only destroy the desired operational characteristics of these facilities and in the end compound rather than relieve the transportation problems of our urban areas." He said the critical need was for each area to develop "a comprehensive transportation plan, which . . . must be an integral part of the area's over-all plans for urban development and growth."

NEED FOR COORDINATED TRANSPORTATION PLANNING

A combination of factors has stood in the way of over-all planning of urban transportation. The Committee for Economic Development has pointed out:

Transportation networks within metropolitan areas are basic, the capital costs of new construction are high, and the operating costs of rail and mass transportation are heavy. Yet in most metropolitan areas there is no single public agency able to study the relative needs for highway, mass transit, or rail. There is no

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single body able to allocate costs among users, businesses and the general tax funds. No authoritative body is able to balance transportation capacity and the traffic-generating uses of land.

Under these circumstances many ills are apparent: undue congestion, duplicated facilities, poor service, financial difficulties, inequitable sharing of burdens, and inadequate anticipation of future needs and costs.⁶

The summary of a coming Senate Commerce Committee report on *National Transportation Policy* attributes "deep-seated deficiencies in urban transportation" to lack of coordination between the various systems for moving people. "We have a jumble of bits and pieces—scraps of multi-lane highway, bridges, tunnels, parking facilities, bus companies, rapid transit lines, and suburban railroad trains—all built without planning and without rational integration and coordination of services." The fundamental problem is that "There is no present jurisdiction of government that 'fits' the metropolitan area when area-wide planning and construction is required."

The federal government has stimulated some degree of urban transportation planning under multi-jurisdictional authorities, however, by making funds available for the purpose under the housing and highway programs. Commissioner Armstrong has said that efforts of the Bureau of Public Roads to link the highway program with urban development have been successful in a number of communities and that its surveys show "there has been a lot more planning than is generally supposed."⁷

President Eisenhower noted in his last budget message, Jan. 16, that the Department of Commerce along with the Housing and Home Finance Agency had established a new procedure for joint use of urban planning grants and highway research and planning funds to "encourage effective coordination and cooperation among the many local governments and the state and federal agencies engaged in metropolitan development activities." He recommended that statutory limitations on appropriations for urban planning grants be removed, and that federal grants be increased from \$4 million in the current fiscal year to \$10 million in fiscal 1962.

The 1960 Democratic platform called for "federal aid for

⁶ Committee for Economic Development, *Guiding Metropolitan Growth* (August 1960), p. 23.

⁷ Address at Conference on Economic Problems of Boston Area, June 9, 1960.

comprehensive metropolitan transportation programs, including bus and rail mass transit, commuter railroads as well as highway programs and construction of civil airports." Among "immediate objectives" put forth in a report on regulatory agencies which James L. Landis submitted to President-elect Kennedy on Dec. 26 were the following:

1. Achievement of a program for amelioration of interurban public transportation, including establishment of metropolitan transit commissions with federal aid . . . for the acquisition and improvement of facilities and equipment under sound engineering, operating and financing plans.
2. Formulation of policies to coordinate federal highway aid programs with approved metropolitan transit plans, so as to promote the economic soundness and efficiency of metropolitan transportation systems as a whole, with emphasis on the avoidance of traffic congestion and the decline of public transportation.

Kennedy's task force on housing and urban development, headed by Joseph P. McMurray, recommended on Jan. 7 immediate enactment of "a program for planning grants and \$100 million for public facility loans" and creation of a presidential study commission "to determine future [urban transportation] needs."

The National Committee on Urban Transportation, founded in 1954, has developed a series of guides and manuals to assist in gathering and analyzing the factual data needed for transportation planning. The manuals, product of the joint efforts of 175 top experts, not only provide guides to methods of determining transportation needs but also explain how to set up the financial, legal and administrative machinery needed to carry out a plan.

PROPOSAL TO ASSIST MASS TRANSIT DEVELOPMENT

The Senate approved a bill last year to amend the Housing Act of 1954 to authorize federal grants for planning of transportation systems in metropolitan areas and federal loans for improvement of mass transportation systems. The Senate Banking Committee's report on the bill (labeled the Mass Transportation Act of 1960) noted that the federal highway program was "on the verge of large-scale construction in metropolitan areas" but that "most urban communities . . . lack adequate comprehensive plans." The committee felt that, while there had been considerable highway planning at federal and state levels, local communities had not been sufficiently engaged in the effort.

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Sen. Harrison A. Williams, Jr. (D N.J.), who introduced the bill, said that it would encourage more study of the interrelationship between transportation and urban development and thereby constitute a step toward "tackling congestion at its source." Instead of continually increasing transportation capacity to accommodate unplanned growth, efforts would be made to control future land use and thus limit the need for proliferation of highways.

Loans authorized by the measure were to be made, through the Housing and Home Finance Agency, to assist states and local governments in building mass transportation facilities conforming to coordinated transportation-urban development plans. The loans, limited to an aggregate \$100 million outstanding, were to bear interest at a maximum rate of $3\frac{1}{8}$ per cent. Loans were to go only to municipalities which were unable to obtain funds from other sources at equally favorable rates of interest. Proceeds of the loans were to be used to acquire, construct or improve transportation facilities and equipment. They might be used to buy new railroad commuter cars, to relocate railroad stations, to provide fringe parking adjacent to bus or rail stations, to modernize traffic control systems, or for comparable purposes. The Senate passed the bill on June 27, but it failed of action by the House before adjournment.

A similar bill introduced by Williams on Jan. 11 of this year would offer still broader assistance. Authorizations for low-cost, long-term loans would be raised from \$100 million the first year to \$150 million annually thereafter. Provision would be made for a federal program of technical assistance and research on land use and transportation planning, on costs of traffic congestion, on commutation patterns, and on new technological developments in transport. A grant program of \$75 million would be available to help states and localities prepare area-wide transportation plans.

The Eisenhower administration opposed last year's Williams bill. Acting Secretary of the Treasury Laurence B. Robbins expressed the view, in a letter to the Senate Banking Committee on May 9, that "The development of adequate urban transportation systems is the primary responsibility of the municipalities and . . . transit authorities." The financial burden "should not be shifted to the taxpayers of the nation as a whole." Both the Treasury Department

and the Housing and Home Finance Agency objected that the "subsidy interest rate" would put an unreasonable burden on the federal government.

FEDERAL INTEREST IN URBAN TRANSPORTATION CRISIS

Federal interest in solution of urban traffic problems is based on recognition of the "economic implications of the urban transportation crisis to the nation as a whole." The Senate Banking Committee said in its report on the Williams bill last June 15:

The congestion of vehicles stifles downtown business activity, which, in turn, reduces city revenue from real estate and retail sales taxes. The lack of adequate mass transportation wastes several billions of dollars of productive time lost in traffic jams. . . . The movement of goods in urban areas and in interstate commerce is delayed, thus adding to their cost.

In short, traffic congestion acts as a brake on the economic growth of the metropolitan areas and thus on the growth of the nation, inasmuch as the metropolitan areas account for more than 75 per cent of all manufacturing and of wholesale and retail sales in the country.

Overloading of city streets is a particular aspect of the problem that engages the attention of the federal government. The Banking Committee said the federal government was obliged to help in developing steps to assure the most efficient use of urban highways so as to limit the continuing demand for "heavy expenditures of highway funds in concentrated urban areas to compensate for the mass transportation decline." The summary of the coming Senate Commerce Committee report on transportation policy asserts that "The federal government . . . has a certain responsibility to work cooperatively with local public organizations for preserving and operating rail services." It recommends more low-interest credit and tax relief for rail systems operating commuter services.

Overlapping of political jurisdictions in metropolitan areas tends to bring the federal government into the local transportation picture. The Commerce Committee report says that solution of the urban transport problem depends to large extent on finding "the best way to administer public funds and public operation in all parts of large, multi-state areas." It recommends that the federal government (1) "Better coordinate the many federal programs [for] spending money in metropolitan areas"; (2) "Much more actively support comprehensive, area-wide, land use

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and transportation planning"; and (3) "Undertake an adequate program of basic research in organic urban growth and in urban economic and transportation development." After these programs have been put under way, "it will be possible to make a sound judgment as to the need for additional federal expenditures for urban transportation and how they should be applied."

Steps to Relieve Traffic Congestion

STEPS TAKEN to keep abreast of the rising tide of automobile traffic, beyond building freeways and expressways, have ranged from restoration of faltering rapid transit systems to installation of new traffic control devices. There is some indication that the fall in patronage of public transit has been checked. At a convention of the American Transit Association in Philadelphia last October, upturns in business for the first time in more than a decade were reported from several cities.⁸ An A.A.A. survey of urban transportation, scheduled for early publication, has found that "In city after city, where a start has been made on expressway construction and where modern traffic management and engineering techniques have been employed to make better use of old facilities, more vehicles are moving at a more rapid pace than they were several years ago, in spite of population growth and increases in motor vehicle registration."

EFFORTS TO SALVAGE RAIL COMMUTER SERVICE

Considerable interest has centered on the efforts of Philadelphia to shore up its declining rail commuter service as an aid to keeping its narrow streets from becoming choked with automobiles.⁹ An experimental program for improving commuter service between the downtown and Chestnut Hill sections was set in motion by the city late in 1958 with the cooperation of the two railroads serving the area and the local transit company. The plan provided for improved

⁸ The *Wall Street Journal* reported Oct. 17, 1960, that in the first eight months of the year the New York Transit Authority had a 2.1 per cent gain in patronage and the San Francisco transit system a 0.4 per cent increase. Slight gains were recorded in Jacksonville, Fla., and Norfolk, Va.; in certain other cities the rate of decline leveled off.

⁹ Mayor Richardson Dilworth told the Senate Banking subcommittee, May 23, that the average width of Philadelphia streets carrying heavy traffic was only 25 feet from curb to curb.

schedules, a bus-feeder service to rail stations, and reduced fares. The city put up \$320,000 to compensate the railroads for expected losses on the service.

Within a year, rail patronage had increased 30 per cent, despite the fact that many of the coaches were nearly 50 years old and the dilapidated station facilities had not been renovated. Auto traffic on the most heavily traveled highways in the area dropped 10 per cent in the morning hours. Questioning of motorists indicated that three out of 10 would switch to the commuter line if the equipment was improved and if parking space convenient to the railroad stations was made available.

Success of this venture led to the launching in September 1959 of a commuter improvement program on a line serving another outlying area. The railroad was compensated for an expected loss of \$105,000 during a 33-week experimental period. A study showed that, as a result of these two programs, 2,000 fewer automobiles entered the stream of traffic in the center of the city each day.

Plans now call for an extension of the commuter improvement plan. A non-profit Passenger Service Improvement Corporation, representing the City of Philadelphia, the public, the railroads and the rail unions, has been formed to negotiate contracts with the railroads to better commuter service. Public funds are being sought for purchase of new equipment to improve the efficiency of commuter line operations.

Beginning last September, the State of New Jersey began paying subsidies to eight railroads under an agreement for maintenance of commuter service to New York City. The legislation authorizing the program, enacted June 6, provided \$6 million to finance the state subsidies for one year.

New York City, which directly subsidizes mass transit to the tune of \$90 million annually, gives commuter lines an indirect subsidy through tax abatement. State legislation enacted two years ago created an office of transportation with specific responsibilities for urban and commuter transportation. It authorized state aid to municipalities to cover one-half the cost of real property tax relief granted by the localities to the railroads. Gov. Nelson A. Rockefeller recommended new legislation last Jan. 4 to accelerate pro-

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vision of local tax relief to railroads with commuter lines in return for "definite commitments for continued and improved service." The governor proposed also a constitutional amendment to enable the state to guarantee New York Port Authority bonds for financing acquisition of commuter-car equipment.¹⁰

MEASURES TO SPEED UP PUBLIC TRANSIT SERVICE

A number of measures have been taken to improve the efficiency of transit operations, not only for the purpose of drawing more patronage to this space-saving form of transportation but also to help keep all traffic moving. Reservation of certain lanes on urban thoroughfares for the exclusive use of buses is proving to be an effective method of alleviating congestion. The special bus lane on one Nashville route is reported to have reduced travel time by as much as 30 per cent at certain times of day. In Atlanta bus travel time was cut by one-third and private automobile travel time by a larger figure. Other cities providing special bus lanes include Baltimore, Birmingham, Cleveland, Cincinnati and Dallas.

Opening of service in June 1958 on the rail rapid transit line along Chicago's Congress Street expressway marked a major innovation in combined transit-expressway routing. The expressway, constructed in a ditch that cuts through some of the most heavily built-up sections of the city, has four-lane roadways on either side of the two tracks of the rapid transit line. This facility replaced a 50-year-old elevated line which would have required costly renovation if it had been kept when the new expressway was built.

A number of transit companies have revised routes and eliminated little-used stops to speed up service. The Cleveland transit system experienced an upturn in business after 2,000 parking spaces were provided in lots adjacent to transit stations. Purchase of modern buses has attracted new business in some areas. The St. Louis transit system estimated that acquisition of a large fleet of air-conditioned buses brought a 16.4 per cent average daily increase in

¹⁰ An official four-state committee, representing Connecticut, Massachusetts, New York and Rhode Island, proposed on Jan. 21 an emergency plan to rescue the financially stricken New Haven Railroad, which serves localities in all four states. The plan calls for a 75 per cent cut in local and state taxes on the carrier, repeal of the federal excise tax on non-commuter fares without a corresponding fare reduction, and increases in commuter fares in return for a commitment to improve passenger service.

revenue during the summer of 1958; two-thirds of the new business was retained through the following winter.

ENGINEERING TECHNIQUES TO KEEP TRAFFIC MOVING

"Traffic engineering" embraces a host of techniques, devices and regulations used to keep traffic moving when thoroughfares are filled to capacity. One of the cheapest and most effective ways to reduce congestion has been the adoption of a system of one-way streets. According to the A.A.A., one-way streets have cut travel time in half in many cities.

Painting or otherwise marking traffic lanes on streets and roadways is another relatively inexpensive method of increasing capacity and hence maintaining the flow of traffic. Development of new plastic stripping material has made marking of road lanes a relatively simple and speedy process. Other measures that have been effective in combating traffic congestion include widening narrow streets, installing flexible signal systems, providing special bays for bus stops, and adopting reversible unbalanced traffic lanes to provide more channels for cars going downtown during morning rush hours and for cars going away from the center of the city during afternoon rush periods.

Chicago has been developing what is known as a "preferential street system," a network of streets being improved to enable them to carry both local and express traffic with a minimum of delay and congestion. Existing streets and the traffic carried on them were exhaustively studied to provide a realistic basis for designating certain street routes for improvement. The improvements have varied according to the particular traffic situation or physical limitations. Certain intersections were widened. If the traffic load was heavy enough, grade separations or overpasses were built. In some cases an overpass of only two lanes has provided, at relatively low cost, a free flow of through traffic across an intersection that used to be regularly jammed with cars.

In other instances the city acquired wider than average rights of way in areas slated for redevelopment. Access to certain preferential streets was limited to prevent blocking of the traffic flow. At some congested intersections in business districts the preferential route was developed to by-pass the commercial area so that other streets could be used freely for local access without being clogged with

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through traffic. Curb parking bans, one-way street designations, and other traditional devices for controlling traffic have been instituted where deemed advisable.

The preferential street system is a long-range plan to bring about, by increasing the capacity of existing streets, not only freer traffic flow within and between neighborhoods but also improved access to expressways. A governing principle has been to avoid extensive tearing up of streets and to avoid construction of new expressways in the heart of the city. Capacity is increased by carrying out a number of small and relatively inexpensive improvements linked to existing or planned land use. Eventually 300 miles of Chicago streets will be developed to maximum standards, with frequent grade separations and separate service drives, while another 800 miles will have minor improvements.

Provision of off-street parking is a favored device for keeping down congestion. Municipal authorities are reported to have spent around \$1 billion on parking facilities. Three-fourths of the cities of 10,000 or more population have provided off-street parking space; only 40 per cent of cities in that group had done so a decade ago. The main impetus behind expansion of municipal parking facilities has been the desire to maintain the economic health of the downtown sections of cities.

USE OF ZONING TO FACILITATE TRAFFIC MOVEMENT

Many local governments are handicapped in making an effective attack on traffic congestion, according to the National Committee on Urban Transportation, by a lack of legal authority to take the necessary action. In some cases municipal authorities are hampered by constitutional or statutory restrictions on their right to raise revenue; in other cases the requirements of obsolete zoning laws get in the way. "Cities must face the fact that the demands of modern urban transportation require modern legal machinery."¹¹ The committee has prepared a manual to assist local officials and planners in efforts to bring pertinent laws and ordinances up to date.

A U.S. Bureau of Public Roads official urged recently that zoning ordinances be updated "in a manner that will enable them to handle today's [traffic] problems." Appro-

¹¹ National Committee on Urban Transportation, *Better Transport for Your City* (1958), p. 86.

priate zoning regulations, he said, "can be used to combat the almost universal urban problem of congested traffic facilities." If the zoning regulations recognize "the functional relationship between streets and the zones they serve, [they] can help correct defects in existing street systems by achieving a desirable balance between (a) traffic generators of all types and sizes, (b) street capacity for moving vehicles, and (c) off-street parking and other terminal facilities."¹²

Zoning regulations, it was said, should require new commercial developments to provide separate service roads, buffer strips and building setbacks. An increasing number of communities now are making it mandatory for new office buildings and other commercial establishments to provide off-street parking and loading facilities to prevent congestion on adjacent streets.

Most of the measures being taken today to relieve congestion represent efforts to correct conditions that have been growing progressively worse with the rapid postwar increase of motor vehicle traffic. A commentator on metropolitan problems has suggested that "The day may come when a profession of specialized expeditors may watch over the smooth and quick flow of traffic and communication in our metropolitan areas, to identify and remove bottlenecks and overloads before their effects become cumulative and choking."¹³

¹² W. H. Stanhagen, "Zoning and Traffic Congestion," *Urban Research* 1960, p. 21.

¹³ Karl Deutch, "On Social Communication and the Metropolis," *Daedalus*, Winter 1961, p. 108.



